

CLAIMS

1. An immunogenic composition comprising a xenogeneic P501S polypeptide or a xenogeneic P501S-encoding polynucleotide, or an immunogenic fragment thereof; and a pharmaceutically acceptable carrier.
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2. An immunogenic composition as claimed in claim 1 wherein the xenogeneic P501S polypeptide or immunogenic fragment thereof is selected from the group comprising SEQ ID NO:1 or SEQ ID NO:3 or SEQ ID NO:10.
3. An immunogenic composition as claimed in claim 1 wherein the xenogeneic
10 P501S-encoding polynucleotide or immunogenic fragment thereof is selected from the group comprising SEQ ID NO:2 or SEQ ID NO:4 or SEQ ID NO:11.
4. An immunogenic composition as claimed in any of claims 1 to 3 which additionally comprises a TH-1 inducing adjuvant.
5. An immunogenic composition as claimed in claim 4 in which the TH-1 inducing
15 adjuvant is selected from the group of adjuvants comprising: 3D-MPL, QS21, an immunostimulatory CpG oligonucleotide, a mixture of QS21 and cholesterol or a combination of one or more of any of these adjuvants.
6. An immunogenic composition comprising an effective amount of antigen
20 presenting cells, modified by in vitro loading with a xenogeneic P501S polypeptide or immunogenic fragment thereof, or genetically modified in vitro to express a xenogeneic P501S polypeptide and a pharmaceutically effective carrier.
7. An immunogenic composition as claimed in any of claims 1 to 6 for use in medicine.
8. A process for the production of an immunogenic composition as claimed in any of
25 claims 1 to 7, comprising admixing a xenogeneic P501S polypeptide or a xenogeneic P501S-encoding polynucleotide with a suitable adjuvant, diluent or other pharmaceutically acceptable carrier.
9. An isolated polypeptide comprising an amino acid sequence which has at least
30 92% identity to the amino acid sequence of SEQ ID NO:1 over the entire length of of SEQ ID NO:1.

10. An isolated polypeptide as claimed in claim 9 in which the amino acid sequence has at least 95% identity to SEQ ID NO:1.
11. The polypeptide as claimed in claim 10 comprising the amino acid sequence of SEQ ID NO:1.
- 5 12. The isolated polypeptide of SEQ ID NO:1.
13. A polypeptide comprising an immunogenic fragment of a polypeptide as claimed in any one of claims 9 to 12 in which the immunogenic activity of the immunogenic fragment is substantially the same as the polypeptide of SEQ ID NO:1.
- 10 14. A polypeptide as claimed in any of claims 9 to 13 wherein said polypeptide is part of a larger fusion protein.
15. An isolated polynucleotide encoding a polypeptide as claimed in any of claims 9 to 14.
- 15 16. The isolated polynucleotide of claim 15, comprising the sequence of SEQ ID NO:2.
17. An isolated polynucleotide comprising a nucleotide sequence encoding a polypeptide that has at least 92% identity to the amino acid sequence of SEQ ID NO:2, over the entire length of SEQ ID NO:2; or a nucleotide sequence complementary to said isolated polynucleotide.
- 20 18. The isolated polynucleotide as defined in any one of claims 15 to 17 in which the identity is at least 95%.
19. An expression vector or a recombinant live microorganism comprising an isolated polynucleotide according to any one of claims 15 - 18.
- 25 20. A host cell comprising the expression vector of claim 19 or the isolated polynucleotide of claims 15 to 18.
21. A process for producing a polypeptide of claims 9 to 14 comprising culturing a host cell of claim 20 under conditions sufficient for the production of said polypeptide and recovering the polypeptide from the culture medium.

22. The use of a polypeptide or a polynucleotide as claimed in any of claims 9 to 18 in the manufacture of an immunogenic composition for immunotherapeutically treating a patient suffering from or susceptible to prostate cancer or other P501S-associated tumours or diseases.
- 5 23. A method of inducing an immune response against human P501S having an amino acid sequence as set forth in SEQ ID NO:5 to SEQ ID NO:7 in a human, comprising administering to the subject an effective dosage of an immunogenic composition comprising a xenogeneic form of said human P501S.
- 10 24. The method of claim 23, wherein said immunogenic composition is according to any of claims 1 to 5.
25. The method of claim 23, wherein said xenogeneic form of human P501S is the rat P501S as claimed in any of claims 9 to 14.
- 15 26. The method of claim 23, wherein said xenogeneic form of human P501S is selected from the group consisting of the mouse P501S having the sequence as set forth in SEQ ID NO:10 and the Cynomolgus monkey P501S having the sequence set forth in SEQ ID NO:3.
27. The method of any of claims 23 to 26, wherein said immunogenic composition includes a live viral expression system or a plasmid vector which expresses said xenogeneic antigen, or through antigen loaded dendritic cells.

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